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Offner

BRIEF STIMULUS APPARATUS

A NEW METHOD OF ELECTRIC SHOCK THERAPY

SHROUT

U.S. PATENT OFFICE
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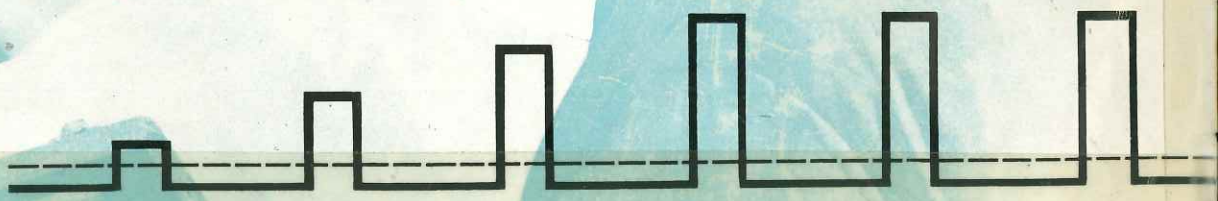

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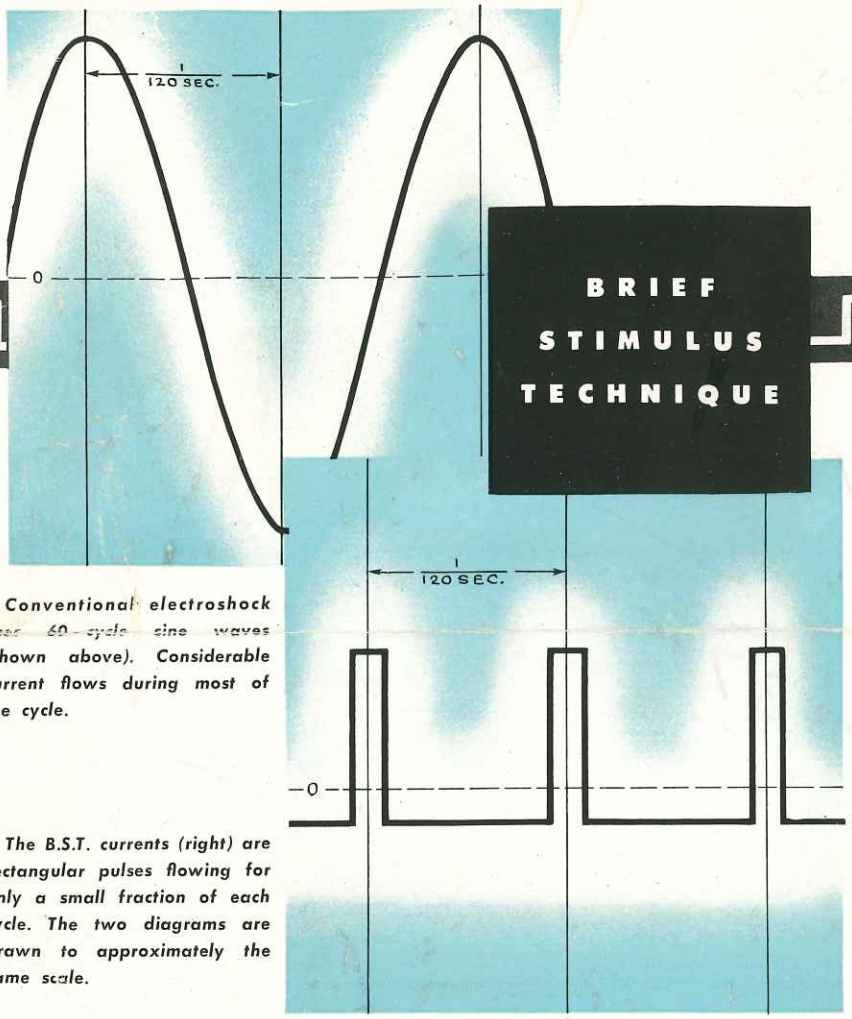
BRIEF STIMULUS TECHNIQUE



Conventional electroshock uses 60-cycle sine waves (shown above). Considerable current flows during most of the cycle.

The B.S.T. currents (right) are rectangular pulses flowing for only a small fraction of each cycle. The two diagrams are drawn to approximately the same scale.

THE METHOD

The technique of administering B.S.T. therapy is very similar to conventional electroshock, and the convulsion produced is almost identical. However, the memory loss and confusion resulting from the treatment are practically eliminated.

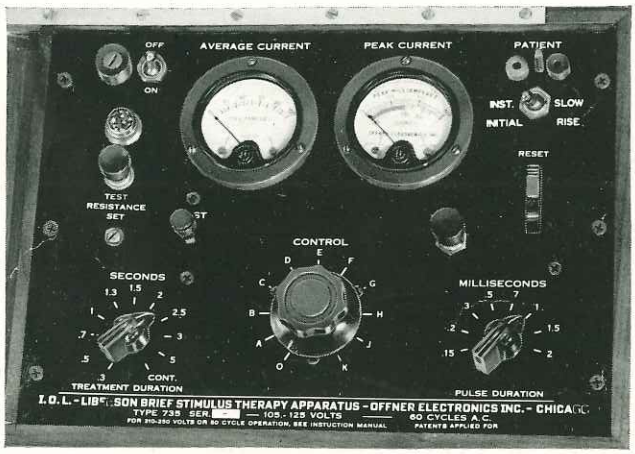
The wave forms used in the two methods are shown to the left. The older sine-wave current has a large amplitude during most of the cycle, while the B.S.T. current pulses flow for only a small fraction of each cycle. This, together with the low power, accounts for the improved physiological effect. The direct current thru the patient is zero, reducing the danger of electrolytic damage.

The electrodes in B.S.T. are applied vertex-temporally, rather than bitemporally, as in the older method.

ELECTRIC SHOCK THERAPY

Electric shock therapy has been very widely adopted in the last seven years. Almost all treatment has employed sine wave alternating currents of sixty cycles per second. This was used originally for simplicity; and continued because of the excellent clinical results obtained. However, it has been recognized from the first[1] that this type of current was not necessarily ideal. In fact, there have always been sound, theoretical reasons to believe that currents of brief duration (as have long been used in electrophysiological investigation) would stimulate the desired centers with less deleterious effects.[2]

Fortunately, an experimental investigation of the effects of such wave forms has been undertaken by Dr. W. T. Liberson of the Institute of Living.[3] The method has now been given extensive clinical tests. The results have confirmed the theory, and it appears probable that this new technique of electric shock which Liberson terms "Brief Stimulus Technique", or B.S.T., will replace the conventional method for many purposes.



FEATURES OF THE 735 APPARATUS

One meter registers the average value of the treatment current; the other, its peak value. This reading is maintained after treatment, for an accurate check. The second meter also checks the electrode resistance. The CONTROL knob sets the treatment current, while the SECONDS knob selects the treatment duration, and the MILLISECOND, the duration of each pulse. The RESET lever protects the patient from excessive current in the event of any apparatus failure. A switch selects slow current rise to reduce danger of fractures.

BRIEF STIMULUS ELECTRIC SHOCK THERAPY APPARATUS TYPE 735

The versatility of the Type 735 provides for changes in technique, and also for use in experimental work.

Pulse duration is adjustable from .15 to 2 milliseconds. The treatment duration is electronically controlled from .3 to 5 seconds. Manual control is also provided.

The pulse amplitude is continuously variable from zero to one ampere peak current. Meters register the average and peak currents, the latter holding its reading after the treatment, to give an accurate check of the dosage.

Electrode resistance is also checked to insure good contact. However, the exact resistance is unimportant, as the instrument is self-adjusting.

Slow initial rise of the current, shown schematically on the cover, has been recommended by Dr. Douglas Goldman[4] and Dr. Esther Tietz to reduce the danger of fractures. Either slow or instantaneous rise may be selected.

The Type 735 is mounted in a walnut portable carrying case, 16 x 9 x 11 inches high, and is supplied with full instructions and accessories.

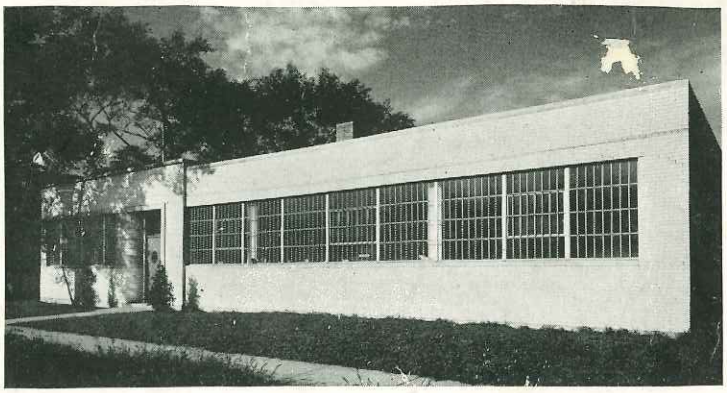
1. Offner Electronics Data Sheet 11-0-1 (November 1940).
2. Franklin Offner, "Stimulation with Minimum Power," J. Neurophysiol., 1946, 9:387-390.
3. W. T. Liberson and P. H. Wilcox, Institute of Living Digest, May, 1945.
4. Douglas Goldman, "Brief Stimulus Electric Shock Therapy," paper at May 1947 Am. Psych. Assn. meeting.

WARRANTY

The Offner Type 735 Shock Therapy Apparatus is warranted to be free of defects in material and workmanship, and will be repaired free of charge for a period of one year provided that it is returned to the factory, transportation charges prepaid. The apparatus has been carefully designed to give the type of treatment recommended by the originators of this therapy. We specifically make no claim as to the effectiveness of shock treatments, nor to the possibility of ill effects.

★ ★ ★

The Type 735 Brief Stimulus Technique Apparatus was designed in cooperation with Dr. W. T. Liberson of the Institute of Living at Hartford, and Dr. Douglas Goldman, Longview Hospital, Cincinnati. The latest advances in clinical practice can best be learned from one of the users of this apparatus. Names of those in your vicinity will be furnished on request.



IN the modern laboratory shown above, Offner Electronics Inc. develops and manufactures specialized instruments that have won world-wide acceptance. In addition to the Brief Stimulus Therapy Apparatus described in the preceding pages, and the conventional Type 732 Shock Therapy Apparatus, other instruments include:

ELECTROENCEPHALOGRAPHS * * * ELECTROPHYSIOLOGICAL LABORATORY APPARATUS * * * CRYSTOGRAPH RECORDERS AIRCRAFT TESTING INSTRUMENTS * * * AIRCRAFT CONTROLS INDUSTRIAL CONTROL EQUIPMENT

In World War II Offner equipment saw service in the Medical Departments of all branches of the armed services as well as in special projects including the atomic bomb. Other Offner equipment was used in the development and manufacture of the majority of aircraft produced in this country. The same precision necessary to meet the exacting requirements of such equipment is built into each Offner instrument.

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